

Pending  
 Active  
 L1: (3132) ((thermal or heat) adj (spreader or sink))  
 L2: (1154) 1 and (hole or opening)  
 L3: (701) 2 and (wire or bar)  
 L4: (37) 3 and (((thermal or heat) adj (spreader or sink))  
 L5: (6) (US-6201701-S or US-6166937-S or US-5274541-S)  
 L7: (1) 6 and (second adj (chip or die or "IC"))  
 L8: (28) 2 and (second adj (chip or die or "IC"))  
 L6: (37) 4 not 5  
 Failed  
 Saved  
 (810) power and (heat adj sink) and (heat adj generat  
 (302) (power and (heat adj sink) and (heat adj generat  
 (961) power and (heat adj sink) and (heat adj generat  
 (127) ((power and (heat adj sink) and (heat adj generat  
 (84) (((power and (heat adj sink) and (heat adj generat  
 (20) (((((power and (heat adj sink) and (heat adj generat  
 (13) (((((power and (heat adj sink) and (heat adj gene  
 (9) Cross-referenc

Browse | Queue | Gear | DB: USPAT-US-PGPUS-EPO-JPO-ESM-TDB | P: Plurals  
 Default operator: OR | P: Highlight all hit terms initially

3 and (second adj (chip or die or "IC"))

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	U	I	PT	P	Document ID	Issue Date	Pages	Title	Current OR	Current
1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	US 6828511	20041207	82	Prefabricated semiconductor chip carrier	174/260	174/267; 257/692;
					B2					
2	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	US 6822875	20041123	16	Assembly of opto-electronic module with improved heat sink	361/760	174/259; 174/52.4
					B2					
3	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	US 6765291	20040720	18	IC package with dual heat spreaders	257/713	257/686; 257/723;
					B2					
4	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	US 6753207	20040622	10	Stacked semiconductor package and fabricating method thereof	438/109	257/E23.1; 9;
					B2					
5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	US 6710433	20040323	18	Leadless chip carrier with embedded inductor	257/678	174/264; 257/706;
					B2					
6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	US 6646334	20031111	10	Stacked semiconductor package and fabricating method thereof	257/686	257/675; 257/712;
					B2					
7	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	US 6577013	20030610	13	Chip size semiconductor packages with stacked dies	257/777	257/618; 257/620;
					B1					
8	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	US 6518098	20030211	19	IC package with dual heat spreaders	438/122	257/E23.1; 1;
					B2					
9	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	US 6508595	20030121	17	Assembly of opto-electronic module with improved heat sink	385/92	257/722; 257/E23.
					B1					
10	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	US 6458609	20021001	50	Semiconductor device and method for manufacturing thereof	438/15	257/E21.3;
					B1					
11	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	US 6339191	20020115	87	Prefabricated semiconductor chip carrier	174/52.4	257/692; 257/E23.1
					B1					
12	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	US 6326687	20011204	23	IC package with dual heat spreaders	257/713	257/686; 257/706;
					B1					
13	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	US 6133637	20001017	50	Semiconductor device having a plurality of semiconductor chips	257/777	257/666; 1

Ready

NUM

(-186)

L Number	Hits	Search Text	DB	Time stamp
1	3132	((thermal or heat) adj (spreader or sink)) with (metal\$4) and (chip or die or "IC")	USPAT	2005/01/18 17:25
2	1154	((((thermal or heat) adj (spreader or sink)) with (metal\$4) and (chip or die or "IC")) and (hole or openning))	USPAT	2005/01/18 17:25
3	701	(((((thermal or heat) adj (spreader or sink)) with (metal\$4) and (chip or die or "IC")) and (hole or openning)) and (wire or bar))	USPAT	2005/01/18 17:25
4	37	(((((thermal or heat) adj (spreader or sink)) with (metal\$4) and (chip or die or "IC")) and (hole or openning)) and (wire or bar)) and (((thermal or heat) adj (spreader or sink)) with (metal\$4) and (chip or die or "IC")).ab.	USPAT	2005/01/18 17:25
5	6	(US-6201701-\$ or US-6166937-\$ or US-5274541-\$ or US-5734193-\$ or US-4670833-\$ or US-4298846-\$).did.	USPAT	2005/01/18 17:26
7	1	(((((thermal or heat) adj (spreader or sink)) with (metal\$4) and (chip or die or "IC")) and (hole or openning)) and (wire or bar)) and (((thermal or heat) adj (spreader or sink)) with (metal\$4) and (chip or die or "IC")).ab.) not ((US-6201701-\$ or US-6166937-\$ or US-5274541-\$ or US-5734193-\$ or US-4670833-\$ or US-4298846-\$).did.)) and (second adj (chip or die or "IC"))	USPAT; US_PGPUB; EPO; JPO; IBM_TDB	2005/01/18 17:27
8	28	(((((thermal or heat) adj (spreader or sink)) with (metal\$4) and (chip or die or "IC")) and (hole or openning)) and (wire or bar)) and (second adj (chip or die or "IC"))	USPAT; US_PGPUB; EPO; JPO; IBM_TDB	2005/01/18 17:27
6	37	(((((thermal or heat) adj (spreader or sink)) with (metal\$4) and (chip or die or "IC")) and (hole or openning)) and (wire or bar)) and (((thermal or heat) adj (spreader or sink)) with (metal\$4) and (chip or die or "IC")).ab.) not ((US-6201701-\$ or US-6166937-\$ or US-5274541-\$ or US-5734193-\$ or US-4670833-\$ or US-4298846-\$).did.)	USPAT; US_PGPUB; EPO; JPO; IBM_TDB	2005/01/18 17:32
-	810	power and (heat adj sink) and (heat adj generat\$4) and (metal with body)	USPAT; US_PGPUB; EPO; JPO; IBM_TDB	2004/07/12 10:30
-	302	(power and (heat adj sink) and (heat adj generat\$4) and (metal with body)) and circuit and board and (via or hole)	USPAT; US_PGPUB; EPO; JPO; IBM_TDB	2004/07/12 10:30
-	961	power and (heat adj sink) and (heat adj generat\$4) and (metal\$4 with body)	USPAT; US_PGPUB; EPO; JPO; IBM_TDB	2004/07/12 10:30
-	127	((power and (heat adj sink) and (heat adj generat\$4) and (metal with body)) and circuit and board and (via or hole)) and circuit and (carrier or board) and (via or hole) and (wir\$4 and bond\$4)	USPAT; US_PGPUB; EPO; JPO; IBM_TDB	2004/07/12 10:34
-	84	((power and (heat adj sink) and (heat adj generat\$4) and (metal with body)) and circuit and board and (via or hole)) and circuit and (carrier or board) and (via or hole) and (wir\$4 and bond\$4)) and (insulat\$4 or dielectric) and (chip or die)	USPAT; US_PGPUB; EPO; JPO; IBM_TDB	2004/07/12 10:35

-	20	((((power and (heat adj sink) and (heat adj generat\$4) and (metal with body)) and circuit and board and (via or hole)) and circuit and (carrier or board) and (via or hole) and (wir\$4 and bond\$4)) and (insulat\$4 or dielectric) and (chip or die)) and (wir\$4 adj bond)	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/07/12 10:36
-	13	(((((power and (heat adj sink) and (heat adj generat\$4) and (metal with body)) and circuit and board and (via or hole)) and circuit and (carrier or board) and (via or hole) and (wir\$4 and bond\$4)) and (insulat\$4 or dielectric) and (chip or die)) and (wir\$4 adj bond)) and (logic or peripher\$4) and circuit	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/07/13 11:25
-	8	Gross-kurt.in.	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/07/13 11:25
-	11	kirchberger-michael.in.	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/07/13 11:26
-	12	kulig-stefan.in.	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/07/13 11:26
-	22	Gross-kurt.in. kirchberger-michael.in. kulig-stefan.in. rappl-hans.in.	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/07/13 11:27
-	2	((Gross-kurt.in. kirchberger-michael.in. kulig-stefan.in. rappl-hans.in.) or (auerswald-gerd.in.)) and ((heat adj (spreader or sink or releas\$3)))	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/07/13 11:30
-	1223	(circuit adj arrangement) and ((heat and (chip or die or "IC") or component) and (metal\$4 near3 (board or player or layer)))	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/07/13 11:32
-	62	((circuit adj arrangement) and ((heat and (chip or die or "IC") or component) and (metal\$4 near3 (board or player or layer)))) and power and ((thermal or heat) adj (sink or spreader))	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/07/13 11:40
-	25	((circuit adj arrangement) and ((heat and (chip or die or "IC") or component) and (metal\$4 near3 (board or player or layer)))) and power and ((thermal or heat) adj (sink or spreader))) and (insulat\$4 and (peripher\$4 or logic))	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/07/13 11:34
-	25	((((circuit adj arrangement) and ((heat and (chip or die or "IC") or component) and (metal\$4 near3 (board or player or layer)))) and power and ((thermal or heat) adj (sink or spreader))) and (insulat\$4 and (peripher\$4 or logic))) not (((("6160326") "6166937").PN.) ((Gross-kurt.in. kirchberger-michael.in. kulig-stefan.in. rappl-hans.in.) or (auerswald-gerd.in.)) ((Gross-kurt.in. kirchberger-michael.in. kulig-stefan.in. rappl-hans.in.) or (auerswald-gerd.in.)) and ((heat adj (spreader or sink or releas\$3))))	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/07/13 11:34

	15	(((((circuit adj arrangement) and ((heat and (chip or die or "IC") or component) and (metal\$4 near3 (board or player or layer)))) and power and ((thermal or heat) adj (sink or spreader))) and (insulat\$4 and (peripher\$4 or logic))) not (((("6160326" "6166937").PN.) ((Gross-kurt.in. kirchberger-michael.in. kulig-stefan.in. rappl-hans.in.) or (auerswald-gerd.in.)) ((Gross-kurt.in. kirchberger-michael.in. kulig-stefan.in. rappl-hans.in.) or (auerswald-gerd.in.)) and ((heat adj (speaker or sink or releas\$3)))))) and (heat near2 generat\$4)) ((((circuit adj arrangement) and ((heat and (chip or die or "IC") or component) and (metal\$4 near3 (board or player or layer)))) and power and ((thermal or heat) adj (sink or spreader))) and (insulat\$4 and (peripher\$4 or logic))) not (((("6160326" "6166937").PN.) ((Gross-kurt.in. kirchberger-michael.in. kulig-stefan.in. rappl-hans.in.) or (auerswald-gerd.in.)) ((Gross-kurt.in. kirchberger-michael.in. kulig-stefan.in. rappl-hans.in.) or (auerswald-gerd.in.)) and ((heat adj (speaker or sink or releas\$3)))))) and (heat near2 generat\$4)) and (carrier board)	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/07/13 11:35
	10	(((((circuit adj arrangement) and ((heat and (chip or die or "IC") or component) and (metal\$4 near3 (board or player or layer)))) and power and ((thermal or heat) adj (sink or spreader))) and (insulat\$4 and (peripher\$4 or logic))) not (((("6160326" "6166937").PN.) ((Gross-kurt.in. kirchberger-michael.in. kulig-stefan.in. rappl-hans.in.) or (auerswald-gerd.in.)) ((Gross-kurt.in. kirchberger-michael.in. kulig-stefan.in. rappl-hans.in.) or (auerswald-gerd.in.)) and ((heat adj (speaker or sink or releas\$3)))))) and (heat near2 generat\$4)) ((((circuit adj arrangement) and ((heat and (chip or die or "IC") or component) and (metal\$4 near3 (board or player or layer)))) and power and ((thermal or heat) adj (sink or spreader))) and (insulat\$4 and (peripher\$4 or logic))) not (((("6160326" "6166937").PN.) ((Gross-kurt.in. kirchberger-michael.in. kulig-stefan.in. rappl-hans.in.) or (auerswald-gerd.in.)) ((Gross-kurt.in. kirchberger-michael.in. kulig-stefan.in. rappl-hans.in.) or (auerswald-gerd.in.)) and ((heat adj (speaker or sink or releas\$3)))))) and (heat near2 generat\$4)) and (carrier board)	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/07/13 11:35
	1213	((circuit adj arrangement) and ((heat and (chip or die or "IC") or component) and (metal\$4 near3 (board or player or layer)))) not (((((circuit adj arrangement) and ((heat and (chip or die or "IC") or component) and (metal\$4 near3 (board or player or layer)))) and power and ((thermal or heat) adj (sink or spreader))) and (insulat\$4 and (peripher\$4 or logic))) not (((("6160326" "6166937").PN.) ((Gross-kurt.in. kirchberger-michael.in. kulig-stefan.in. rappl-hans.in.) or (auerswald-gerd.in.)) ((Gross-kurt.in. kirchberger-michael.in. kulig-stefan.in. rappl-hans.in.) or (auerswald-gerd.in.)) and ((heat adj (speaker or sink or releas\$3)))))) and (heat near2 generat\$4)) and (carrier board)	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/07/13 11:40
	516	((circuit adj arrangement) and ((heat and (chip or die or "IC") or component) and (metal\$4 near3 (board or player or layer)))) not (((((circuit adj arrangement) and ((heat and (chip or die or "IC") or component) and (metal\$4 near3 (board or player or layer)))) and power and ((thermal or heat) adj (sink or spreader))) and (insulat\$4 and (peripher\$4 or logic))) not (((("6160326" "6166937").PN.) ((Gross-kurt.in. kirchberger-michael.in. kulig-stefan.in. rappl-hans.in.) or (auerswald-gerd.in.)) ((Gross-kurt.in. kirchberger-michael.in. kulig-stefan.in. rappl-hans.in.) or (auerswald-gerd.in.)) and ((heat adj (speaker or sink or releas\$3)))))) and (heat near2 generat\$4)) and (carrier board)) and (internal and (outside or external or side or peripher\$4))	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/07/13 11:41

-	9	((((circuit adj arrangement) and ((heat and (chip or die or "IC") or component) and (metal\$4 near3 (board or player or layer)))) not ((((((circuit adj arrangement) and ((heat and (chip or die or "IC") or component) and (metal\$4 near3 (board or player or layer)))) and power and ((thermal or heat) adj (sink or spreader))) and (insulat\$4 and (peripher\$4 or logic))) not (((("6160326" "6166937").PN.) ((Gross-kurt.in. kirchberger-michael.in. kulig-stefan.in. rappl-hans.in.) or (auerswald-gerd.in.)) ((Gross-kurt.in. kirchberger-michael.in. kulig-stefan.in. rappl-hans.in.) or (auerswald-gerd.in.)) and ((heat adj (speaker or sink or releas\$3)))) and (heat near2 generat\$4)) and (carrier board))) and (internal and (outside or external or side or peripher\$4))) and (second adj (chip or die or "IC" or component)) ("5563447"   "5966291").PN.	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/07/13 11:42
-	2	"5563447"   "5966291").PN.	USPAT	2004/07/13 11:43
-	5	("4758926"   "5504378"   "5539254"   "5631821"   "5708297").PN.	USPAT	2004/07/13 11:44
-	10	6166937.URPN.	USPAT	2004/07/13 11:44
-	3456	(metal\$4 adj (board or carrier or substrate or plate or base) and (insulat\$4 or dielectric) and ((thermal or heat) adj (sink or spreader or realeas\$4)))	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/07/13 11:47
-	3283	((metal\$4 adj (board or carrier or substrate or plate or base) and (insulat\$4 or dielectric) and ((thermal or heat) adj (sink or spreader or realeas\$4))) and (chip die device component "IC"))	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/07/13 11:47
-	2940	((metal\$4 adj (board or carrier or substrate or plate or base) and (insulat\$4 or dielectric) and ((thermal or heat) adj (sink or spreader or realeas\$4))) and (chip die component "IC"))	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/07/13 11:48
-	1586	((((metal\$4 adj (board or carrier or substrate or plate or base) and (insulat\$4 or dielectric) and ((thermal or heat) adj (sink or spreader or realeas\$4))) and (chip die component "IC")) and (open\$4 or wir\$\$) and (logic or driv\$4 or periphera\$4)	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/07/13 11:49
-	49	((((metal\$4 adj (board or carrier or substrate or plate or base) and (insulat\$4 or dielectric) and ((thermal or heat) adj (sink or spreader or realeas\$4))) and (chip die component "IC")) and (open\$4 or wir\$\$) and (logic or driv\$4 or periphera\$4)) and ((component or circuit) adj arrangement)	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/07/13 12:41

	45	<p>(((((metal\$4 adj (board or carrier or substrate or plate or base) and (insulat\$4 or dielectric) and ((thermal or heat) adj (sink or spreader or realeas\$4)))) and (chip die component "IC")) and (open\$4 or wir\$\$) and (logic or driv\$4 or periphera\$4)) and ((component or circuit) adj arrangement)) not (((("6160326" "6166937").PN.)</p> <p>((Gross-kurt.in. kirchberger-michael.in. kulig-stefan.in. rappl-hans.in.) or (auerswald-gerd.in.)) (((Gross-kurt.in. kirchberger-michael.in. kulig-stefan.in. rappl-hans.in.) or (auerswald-gerd.in.)) and ((heat adj (spreader or sink or releas\$3)))) (((((((circuit adj arrangement) and ((heat and (chip or die or "IC") or component) and (metal\$4 near3 (board or player or layer)))) and power and ((thermal or heat) adj (sink or spreader))) and (insulat\$4 and (peripher\$4 or logic))) not (((("6160326" "6166937").PN.)</p> <p>((Gross-kurt.in. kirchberger-michael.in. kulig-stefan.in. rappl-hans.in.) or (auerswald-gerd.in.)) (((Gross-kurt.in. kirchberger-michael.in. kulig-stefan.in. rappl-hans.in.) or (auerswald-gerd.in.)) and ((heat adj (spreader or sink or releas\$3)))) and (heat near2 generat\$4)) and (carrier board))</p> <p>((((circuit adj arrangement) and ((heat and (chip or die or "IC") or component) and (metal\$4 near3 (board or player or layer)))) not (((((((circuit adj arrangement) and ((heat and (chip or die or "IC") or component) and (metal\$4 near3 (board or player or layer)))) and power and ((thermal or heat) adj (sink or spreader))) and (insulat\$4 and (peripher\$4 or logic))) not (((("6160326" "6166937").PN.)</p> <p>((Gross-kurt.in. kirchberger-michael.in. kulig-stefan.in. rappl-hans.in.) or (auerswald-gerd.in.)) (((Gross-kurt.in. kirchberger-michael.in. kulig-stefan.in. rappl-hans.in.) or (auerswald-gerd.in.)) and ((heat adj (spreader or sink or releas\$3)))) and (heat near2 generat\$4)) and (carrier board)) and (internal and (outside or external or side or peripher\$4)) and (second adj (chip or die or "IC" or component))))</p>	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/07/13 11:52
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	20	<p>(((((metal\$4 adj (board or carrier or substrate or plate or base) and (insulat\$4 or dielectric) and ((thermal or heat) adj (sink or spreader or realeas\$4)))) and (chip die component "IC")) and (open\$4 or wir\$\$) and (logic or driv\$4 or periphera\$4)) and ((component or circuit) adj arrangement)) not (((6160326 "6166937").PN.)      ((Gross-kurt.in. kirchberger-michael.in. kulig-stefan.in. rappl-hans.in.) or (auerswald-gerd.in.)) ((Gross-kurt.in. kirchberger-michael.in. kulig-stefan.in. rappl-hans.in.) or (auerswald-gerd.in.)) and ((heat adj (speaker or sink or releas\$3))) (((((circuit adj arrangement) and ((heat and (chip or die or "IC") or component) and (metal\$4 near3 (board or player or layer)))) and power and ((thermal or heat) adj (sink or spreader))) and (insulat\$4 and (peripher\$4 or logic))) not (((6160326 "6166937").PN.)      ((Gross-kurt.in. kirchberger-michael.in. kulig-stefan.in. rappl-hans.in.) or (auerswald-gerd.in.)) ((Gross-kurt.in. kirchberger-michael.in. kulig-stefan.in. rappl-hans.in.) or (auerswald-gerd.in.)) and ((heat adj (speaker or sink or releas\$3)))) and (heat near2 generat\$4)) and (carrier board))      (((((circuit adj arrangement) and ((heat and (chip or die or "IC") or component) and (metal\$4 near3 (board or player or layer)))) not (((((circuit adj arrangement) and ((heat and (chip or die or "IC") or component) and (metal\$4 near3 (board or player or layer)))) and power and ((thermal or heat) adj (sink or spreader))) and (insulat\$4 and (peripher\$4 or logic))) not (((6160326 "6166937").PN.)      ((Gross-kurt.in. kirchberger-michael.in. kulig-stefan.in. rappl-hans.in.) or (auerswald-gerd.in.)) ((Gross-kurt.in. kirchberger-michael.in. kulig-stefan.in. rappl-hans.in.) or (auerswald-gerd.in.)) and ((heat adj (speaker or sink or releas\$3)))) and (heat near2 generat\$4)) and (carrier board)) and (internal and (outside or external or side or peripher\$4)) and (second adj (chip or die or "IC" or component)))) and transistor and capacitor</p>	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/07/13 12:36
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	25	<p>((((((metal\$4 adj (board or carrier or substrate or plate or base) and (insulat\$4 or dielectric) and ((thermal or heat) adj (sink or spreader or realeas\$4)))) and (chip die component "IC")) and (open\$4 or wir\$\$) and (logic or driv\$4 or periphera\$4)) and ((component or circuit) adj arrangement)) not (((("6160326" "6166937").PN.)</p> <p>((Gross-kurt.in. kirchberger-michael.in. kulig-stefan.in. rappl-hans.in.) or (auerswald-gerd.in.)) (((Gross-kurt.in. kirchberger-michael.in. kulig-stefan.in. rappl-hans.in.) or (auerswald-gerd.in.)) and ((heat adj (spreader or sink or releas\$3)))) ((((((circuit adj arrangement) and ((heat and (chip or die or "IC") or component) and (metal\$4 near3 (board or player or layer)))) and power and ((thermal or heat) adj (sink or spreader))) and (insulat\$4 and (peripher\$4 or logic))) not (((("6160326" "6166937").PN.)</p> <p>((Gross-kurt.in. kirchberger-michael.in. kulig-stefan.in. rappl-hans.in.) or (auerswald-gerd.in.)) (((Gross-kurt.in. kirchberger-michael.in. kulig-stefan.in. rappl-hans.in.) or (auerswald-gerd.in.)) and ((heat adj (spreader or sink or releas\$3)))) and (heat near2 generat\$4)) and (carrier board))</p> <p>((((circuit adj arrangement) and ((heat and (chip or die or "IC") or component) and (metal\$4 near3 (board or player or layer)))) not ((((((circuit adj arrangement) and ((heat and (chip or die or "IC") or component) and (metal\$4 near3 (board or player or layer)))) and power and ((thermal or heat) adj (sink or spreader))) and (insulat\$4 and (peripher\$4 or logic))) not (((("6160326" "6166937").PN.)</p> <p>((Gross-kurt.in. kirchberger-michael.in. kulig-stefan.in. rappl-hans.in.) or (auerswald-gerd.in.)) (((Gross-kurt.in. kirchberger-michael.in. kulig-stefan.in. rappl-hans.in.) or (auerswald-gerd.in.)) and ((heat adj (spreader or sink or releas\$3)))) and (heat near2 generat\$4)) and (carrier board)) and (internal and (outside or external or side or peripher\$4))) and (second adj (chip or die or "IC" or component)))</p> <p>not ((((((metal\$4 adj (board or carrier or substrate or plate or base) and (insulat\$4 or dielectric) and ((thermal or heat) adj (sink or spreader or realeas\$4)))) and (chip die component "IC")) and (open\$4 or wir\$\$) and (logic or driv\$4 or periphera\$4)) and ((component or circuit) adj arrangement)) not (((("6160326" "6166937").PN.)</p> <p>((Gross-kurt.in. kirchberger-michael.in. kulig-stefan.in. rappl-hans.in.) or (auerswald-gerd.in.)) (((Gross-kurt.in. kirchberger-michael.in. kulig-stefan.in. rappl-hans.in.) or (auerswald-gerd.in.)) and ((heat adj (spreader or sink or releas\$3)))) ((((((circuit adj arrangement) and ((heat and (chip or die or "IC") or component) and (metal\$4 near3 (board or player or layer)))) and power</p>	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/07/13 12:38
Search History	1/18/05 5:37:18 PM	Page 7 and ((the)ma1 b7 heat) adj (sink or spreader))) and (insulat\$4 and (peripher\$4 or logic))) not (((("6160326" "6166937").PN.)		

-		0	((((metal\$4 adj (board or carrier or substrate or plate or base) and (insulat\$4 or dielectric) and ((thermal or heat) adj (sink or spreader or realeas\$4))) and (chip die component "IC")) and (open\$4 or wir\$\$) and (logic or driv\$4 or periphera\$4)) and (transistor and capcitor and ressitor)	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/07/13 12:41
-		0	((((metal\$4 adj (board or carrier or substrate or plate or base) and (insulat\$4 or dielectric) and ((thermal or heat) adj (sink or spreader or realeas\$4))) and (chip die component "IC")) and (open\$4 or wir\$\$) and (logic or driv\$4 or periphera\$4)) and (transistor and capcitor and resistor)	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/07/13 12:42
-		258	((((metal\$4 adj (board or carrier or substrate or plate or base) and (insulat\$4 or dielectric) and ((thermal or heat) adj (sink or spreader or realeas\$4))) and (chip die component "IC")) and (open\$4 or wir\$\$) and (logic or driv\$4 or periphera\$4)) and (transistor and capcitor and resistor)	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/07/13 12:43
-		14	(((((metal\$4 adj (board or carrier or substrate or plate or base) and (insulat\$4 or dielectric) and ((thermal or heat) adj (sink or spreader or realeas\$4))) and (chip die component "IC")) and (open\$4 or wir\$\$) and (logic or driv\$4 or periphera\$4)) and (transistor and capacitor and resistor) and power and (less adj heat)	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/07/13 12:43
-		2	(circuit adj arrangement) and capcitor and (transistor or diode) and (metal adj (film or body or plate or board or substrate))	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/07/14 11:40
-		1026	(circuit adj arrangement) and (metal adj (film or body or plate or board or substrate))	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/07/14 11:40
-		28	(Gross-kurt.in. kirchberger-michael.in. kulig-stefan.in. rappl-hans.in.) or (auerswald-gerd.in.)	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/07/14 11:41
-		2	("6160326" "6166937").PN.	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/07/14 11:41
-		11	rappl-hans.in.	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/07/14 11:41
-		28	((circuit adj arrangement) and (metal adj (film or body or plate or board or substrate))) not (((circuit adj arrangement) and capcitor and (transistor or diode) and (metal adj (film or body or plate or board or substrate))) "6" ("6160326" "6166937").PN.)	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/07/14 11:41

-	1021	((circuit adj arrangement) and (metal adj (film or body or plate or board or substrate))) not (((circuit adj arrangement) and capcitor and (transistor or diode) and (metal adj (film or body or plate or board or substrate)))) ((Gross-kurt.in. kirchberger-michael.in. kulig-stefan.in. rappl-hans.in.) or (auerswald-gerd.in.)) (("6160326" "6166937").PN.) rappl-hans.in.)	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/07/14 11:42
-	233	((circuit adj arrangement) and (metal adj (film or body or plate or board or substrate))) not (((circuit adj arrangement) and capcitor and (transistor or diode) and (metal adj (film or body or plate or board or substrate)))) ((Gross-kurt.in. kirchberger-michael.in. kulig-stefan.in. rappl-hans.in.) or (auerswald-gerd.in.)) (("6160326" "6166937").PN.) rappl-hans.in.)) and (metal\$4 adj board or pad)	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/07/14 11:42
-	15	((circuit adj arrangement) and (metal adj (film or body or plate or board or substrate))) not (((circuit adj arrangement) and capcitor and (transistor or diode) and (metal adj (film or body or plate or board or substrate)))) ((Gross-kurt.in. kirchberger-michael.in. kulig-stefan.in. rappl-hans.in.) or (auerswald-gerd.in.)) (("6160326" "6166937").PN.) rappl-hans.in.)) and (metal\$4 adj (board or pad))	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/07/14 12:02
-	24	"4670833"	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/07/14 12:02
-	7	"4670833" and (metal\$4 and (board or base or plate or substrate))	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/07/14 12:04
-	2	("4449292"   "4498122").PN.	USPAT	2004/07/14 12:06
-	23	4670833.URPN.	USPAT	2004/07/14 12:06
-	6	(US-6201701-\$ or US-6166937-\$ or US-5274541-\$ or US-5734193-\$ or US-4670833-\$ or US-4298846-\$).did.	USPAT	2005/01/18 17:23